miles is practically unexplored in this regard, and Haiti with 30,000 square miles is a veritable *terra incognita*.

PURDUE UNIVERSITY,
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SHORTER NOTES

CONCERNING SOME SPECIES OF CHRYSOPSIS IN COLORADO:—In studying my specimens of *Chrysopsis* I came to some conclusions which are somewhat different from the classification in our manuals. The genus is, of course, a rather difficult one, as the various treatments indicate, and I can only give my conclusions.

It seems to me that *Chrysopsis resinolens* A. Nelson and *C. fulcrata* Greene are the same species, and that since *C. fulcrata* was described earlier than *C. resinolens* it should replace that name. Dr. Greene sent me a specimen of *C. fulcrata*, and while it is a taller plant than any specimen of *C. resinolens* which I have seen, yet the main characters of leaf, the size of the flower-heads and their disposition at the end of the stem, the pubescence, and the resinous atoms on the leaves, are about the same. The species is quite variable according to localities in which it grows, and some forms might be distinguished, yet the plant I have from Dr. Greene and one I have from Prof. Nelson seem to be the same species.

Chrysopsis caudata Rydb. is not the same as *C. fulcrata*, but is a good species, distinguished by the different leaves and larger heads. *Chrysopsis amplifolia* Rydb. is much like *C. caudata* and I think may be referred to that species. *Chrysopsis horrida* Rydb. seems to be too close to *C. hispida* (Hook.) Nutt.

GEORGE E. OSTERHOUT
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REVIEWS

Atkins's Some Recent Researches in Plant Physiology *

As stated in the preface, the general aim of this book is to present to senior students and investigators the results of recent

* Atkins, W. R. G., Some Recent Researches in Plant Physiology. Pp. i–xi +328. With 28 illustrations. London. Whittaker & Co. 1916.

work in a few of those branches of plant physiology which are at present attracting attention. Matter already found in textbooks has been almost entirely excluded. The method of treatment is largely historical, and the topics are for the most part confined to those with which the author has had a first-hand acquaintance in the laboratory—especially such topics as are being investigated by the staff of the school of botany, Trinity College, Dublin. Some hitherto unpublished work is included, and throughout the book quantitative data are quoted wherever obtainable.

There are fourteen chapters dealing, in succession, with the carbohydrates of the Angiosperm leaf in relation to photosynthesis, methods of estimating carbohydrates in plant extracts, the carbohydrates of the Thallophyta and Bryophyta in relation to photosynthesis, the pectic substances, osmotic pressure in plants, the osmotic equilibrium in the cell and its surroundings, the permeability of protoplasm, the permeability of organic membranes other than protoplasm, the magnitudes of osmotic pressures and electric conductivities in plants and the factors which influence them, osmotic pressure in relation to plant distribution, morphology, and cell division, the functions of the wood, the plant oxidases, the oxidases in relation to pigmentation and the anthocyan pigments, the oxidases in relation to plant pathology and to technology.

There is a bibliography of twenty pages, and a good index. The book will certainly be warmly welcomed by those who are pursuing advanced work along related lines, either with classes or as investigators. It serves to put one in convenient touch with a large list of recent titles, and the author's own experience has enabled him to evaluate much of the work he reviews in a manner that will prove helpful.

C. STUART GAGER

PROCEEDINGS OF THE CLUB

OCTOBER 25, 1916

The meeting was held in the morphological laboratory of the New York Botanical Garden at 3:30 P.M. Vice-president Barnhart presided. Twelve persons were present.